

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph from page 8, line 18 to page 9, line 8 with the following amended paragraphs:

Further, the race portions 2c and 4a and the shoulder portion 2d are subjected to roller burnishing (deep rolling) after the finishing. According to the roller burnishing, while a mirror finish ball (mirror finished surface ball) made of ceramics held by, for example, hydraulic pressure is pressed to a surface of a working portion of the race portion 2c, or of the like, to bring into rolling contact therewith by strong pressure, the mirror finish ball is moved on the surface of the working portion. According to the roller burnishing, working conditions of an amount of burnishing, press force and the like are selected such that, for example, hardness at a depth of up to 0.4 ~~at least 0.2mm~~ from the surface of the working portion is work-hardened to be equal to or larger than Hv700 and a residual compressive stress at a depth of up to ~~at least~~ 0.3mm from the surface of the working portion becomes equal to or larger than 800 Mpa.

As clearly illustrated by Figure 1, an exemplary embodiment of the cross-shaft includes a round-shaped section (shoulder 2d) with a center of curvature (not shown) that is at an outer side of the cross shaft member.

Further, Figure 1 clearly illustrates that the round-shaped section (shoulder 2d) does not include a concave angled corner.

Please replace the paragraph at page 9, lines 10 to 20 with the following amended paragraph:

Here, a specific explanation will be given of operation and effect of the roller

burnishing in reference to Fig. 2 and Fig. 3 showing an example of a result of a verifying test which has been carried out by the inventors ~~and the like~~ of the invention. Further, in the following explanation, an explanation will be given by exemplifying a verified result at the race portion 2c on the side of the cross shaft member 2 and a mention will also be given of a measured result of a material only subjected to a carburizing treatment before roller burnishing and a material subjected to shot peening in addition to the carburizing treatment for comparison.

Please replace the paragraph at page 11, lines 8 to 22 with the following amended paragraph:

Further, as shown in Fig. 3, at each race portion 2c, a residual compressive stress equal to or larger than 800MPa is generated at a depth of up to ~~at least~~ 0.3mm from the surface and work hardening is produced up to a depth about twice as much as that of the short-peened product. By producing the large residual compressive stress at the race portion 2c in this way, inner portion originated flaking at the race portion 2c can effectively be restrained from being brought about and the fatigue strength against stresses generated at inside of the race portion 2c can be increased. That is, at the shoulder portion 2d subjected to roller burnishing, the fatigue strength against bending stress operated by two of the shafts 2b continuous to the shoulder portion 2d can be increased and the bending fatigue breaking (fracture) can effectively be restrained from being brought about.

Please replace the paragraph from page 12, line 22 to page 13, line 4 with the following amended paragraph:

Further, according to the embodiment, the residual compressive stress at the depth of up to at least 0.3mm from the respective surfaces of the race portions 2c and 4a and the shoulder portion 2d is made to be equal to or larger than 800MPa and therefore, in comparison with the above-described conventional product, the fatigue strength of the race portions 2c and 4a and the shoulder portion 4d can effectively be increased.